DOCUMENT RESUME

ED 471 182 SP 041 248

AUTHOR	Reiman, Alan J.
TITLE	A Comparison of Four-Year Longitudinal Studies of Postconventional Moral Judgment Reasoning in Teacher Education and Other Selected Undergraduate Samples.
PUB DATE	2002-04-00
NOTE	17p.
PUB TYPE	Reports - Descriptive (141) -- Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	Cognitive Development; Elementary Secondary Education; *Ethical Instruction; Ethics; Higher Education; *Moral Development; *Moral Values; Preservice Teacher Education; Role; Student Teachers
IDENTIFIERS	Guided Study; *Moral Reasoning

ABSTRACT

This paper identifies moral judgment as a needed aim in higher education and teacher education, suggesting that moral issues are a central part of the content of various disciplines in higher education and noting that there are calls to integrate ethics across the curriculum. A cognitive-developmental theory that includes new social role-taking and guided inquiry is described as a potential framework for deliberative educational programming in undergraduate education and teacher education. This framework guided curricular design for two teacher education cohorts. Data were collected to examine students' moral judgment growth across their four-year college experience. A total of eight undergraduate longitudinal studies were compared for gains in postconventional moral judgment as measured by the Defining Issues Test (Rest, 1986). The average gain across the two teacher education cohorts was 12.31 with an averaged effect size of .62. The average gain score gain of 12.31 in postconventional moral judgment was very large. Results highlight a moderate and significant change in postconventional moral judgment reasoning for the preservice teachers. Possible reasons for this change include the deliberative role-taking and guided inquiry curriculum embedded in students' experiences and differences in students' individual characteristics and extracurricular commitments. (Contains 55 references.) (SM)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 471 182

A Comparison of Four-Year Longitudinal Studies of Postconventional Moral Judgment Reasoning in Teacher Education and Other Selected Undergraduate Samples

Alan J. Reiman
Alan_reiman@ncsu.edu
North Carolina State University
College of Education

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Alan J. Reiman

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Presented at the American Educational Research Association, New Orleans
April 5, 2002.

BEST COPY AVAILABLE

ED 471 182

ABSTRACT

The author identifies moral judgment as a needed aim of higher education and teacher education. It has become increasingly clear that moral issues are a central part of the content of various disciplines in higher education. Further, there are calls to integrate ethics across the curriculum. A cognitive-developmental theory that includes new social roletaking and guided inquiry is described as a potential framework for deliberative educational programming in undergraduate education and teacher education. The role-taking and guided inquiry framework guided curricular design for two teacher education longitudinal samples that are reported as a part of the larger collection of longitudinal samples. A total of eight undergraduate longitudinal studies are compared for gains in postconventional moral judgment as measured by the Defining Issues Test (Rest, 1986). The average gain across the two teacher education cohorts is 12.31 with an averaged effect size of .62. The average gain score gain of 12.31 in postconventional moral judgment is very large. Reasons for the size of the gain are discussed in the discussion and implications section of this paper. As well, the average gain score of 12.31 for the two teacher education cohorts was larger than any other higher education institution longitudinal sample that is represented. Implications are drawn for higher education and teacher education.

A Comparison of Four-Year Longitudinal Studies of Postconventional Moral Judgment Reasoning in Teacher Education and Other Selected Undergraduate Samples

Moral Judgment as an Aim of Higher Education

Recently, it has become increasingly clear that moral issues are a central part of the content of various disciplines in higher education. Further, there are calls to integrate ethics across the curriculum (Colby & Erlich, 2000; Pascarella & Terenzini, 1991). Educators need to be more thoughtful about the relationship between technical and substantive knowledge and moral values and democratic practices. Colby and Erlich's analysis finds a need for higher education to connect the intellectual and academic content of learning to development of moral and civic goals (2000). They categorize moral and civic goals as prescriptive judgments. In advocating for moral engagement, they are not suggesting that educational institutions should promote a particular ethical viewpoint, except for a commitment to democratic ideals such as fairness, a willingness to engage in reasoned discourse, and a willingness to respect persons and their perspectives. Instead, with respect to morality,

> "...education should foster the development of moral reasoning and the adoption of viewpoints and commitments that emerge from reasoned consideration and democratic principles. We believe that higher education should encourage and facilitate the development of students' capacities to examine complex situations in which competing values are often at stake, to employ both substantive knowledge and moral reasoning to evaluate the problems and values involved, to develop their own judgments about those issues, and then to act on their judgments" (Colby & Erlich, 2000, xxv).

Colby and Erlich view "civic" as including all realms beyond the family – neighborhoods, local communities, state, national, and cross-national spheres. Civic engagement includes giving time and attention to civic matters, working to understand such matters both individually and through public discourse, and acting for the successful achievement of collective goals. Higher education should provide opportunities and obligations for students to appreciate the responsibilities and rewards of civic engagement, as well as to foster students' capacities for thoughtful participation in public discourse (Colby & Erlich, 2000).

Similar calls for moral development have been made in teacher education. Yet, one of the emerging problems for teacher education is the absence of effective programs for simultaneously improving professional competence (performance) and dispositions of prospective teachers such as their moral judgment. As Wise and Leibbrand note, program designs and assessment of those designs are still in their infancy (Wise & Leibbrand, p. 246, 2001). Further, Fullan (1993) notes that teacher education has ignored the importance of moral disposition in teaching. As teacher education programs examine standards, performance outcomes, and dispositions, it is essential to prepare prospective teachers who are "skilled change agents with moral purpose...(who) will make a difference in the lives of students from all backgrounds, and by doing so help produce

greater capacity in society to cope with change from within" (Fullan, 1993, p.5). Yet the limited number of studies to date (McNeel, 1994) suggest that teacher education students show limited growth in moral judgment during their undergraduate experience. Part of the problem may be due to the lack of more deliberative and integrated curriculum.

The Cognitive-Developmental Approach to Curricular Design

At least a part of the difficulty for teacher education programs has been the lack of adequate directing constructs for the process of teacher education. While there have been literally thousands of studies of instruction and learning (Wittrock, 1986), the research-theory based for teacher education has been only recently emerging (Murray, 1996; Sikula, 1996). These most recent reviews do suggest some progress in a basis for teacher education, yet much work remains. I plan to briefly outline our own efforts over the past two decades in creating educational programs (curricular design and instruction) within a cognitive-developmental framework. Our progress has been epitomized by a long series of field-based studies each in turn leading to changes in the curriculum and delivery, which then has led to the next cycle of experimentation. Two of the longitudinal studies that are reported in this manuscript were guided by this cognitive-developmental approach. However, before I discuss the conceptual framework, a prior question exists, "does moral complexity make a difference?"

Do Moral and Cognitive Complexity Make A Difference in the Real World of Professional Judgment and Action? Over the past twenty years, there has been an exploration of whether cognitive stage makes a difference in the real world of behavior. Blasi (1980) has shown a steady positive relationship between moral stage of development and moral behavior in a meta-analyses of 80 studies. Likewise, Thoma (1994) has summarized research that examines the all important link between moral judgment and actions. Thoma finds that a statistical summary estimate of the strength of the association between judgments and actions is somewhere within a range of 10% to 15%. These relationship estimates may be interpreted as low, but they are quite consistent with other estimates of judgment and action in professional fields (Ajzen, 1988).

Similar findings are reported in reviews of cognitive conceptual and reflective judgment levels. For example, Holloway and Wampold (1986) found that professional adults who process experience more complexly have a greater ability to "read and flex" with pupils or clients, to take the emotional perspective of others, to think on their feet and to find alternative solutions (less "functional fixedness") (O'Keefe & Johnston, 1989). Further, one of the most exciting areas of new diversity research is in the area of connections between teaching for diverse learners and increasing levels of cognitive development. Guthrie, King, and Palmer (2000) find that "intellectual development is significantly related to levels of prejudice toward African Americans, levels of prejudice toward homosexuals, and tolerance" (p.11). Higher levels of tolerance are more likely to be found in individuals with higher levels of intellectual development.

Data has been gathered, and only recently interpreted on over 50,000 persons (Rest, Narvaez, Bebeau, & Thoma, 1999) using the Defining Issues Test (DIT). Higher scores on the DIT have been connected to various prosocial behaviors including community involvement (r=.31) and civic responsibility (r=.44) (Thoma, Rest, & Barnett,

1986). As well, review of 60 published studies show significant links between DIT scores and teacher decision making, nurses' clinical performance, auditors detection of fraudulent financial reports, and accountants perceptions of management's integrity (Rest & Narvaez, 1994). It is important to note, however, that moral judgment is only one part of moral identity. Rest's Four Component Model of morality notes that there are at least four components: moral sensitivity, moral judgment, moral motivation, and moral character (see figure 1).

Place Figure 1 About Here

Limitations of Moral Judgment as an Explanation of Moral Behavior

A caution is needed regarding the "higher is better" evidence and the links between moral judgment and moral behavior. Better does not mean that higher stage persons have more raw intelligence or higher moral status, nor does it mean that persons at more complex moral judgment levels are entitled to more goods or privileges. Instead, the higher stages imply that a person can use more complex conceptual tools as they make meaning of the world. These conceptual tools serve as guides during the decision-making process across professional disciplines. It may be helpful to note that persons also recognize that higher stages are better. As Rest notes (1994), when persons "comprehend two stages, they prefer the higher stage and reject the lower for the same reason that Kohlberg gives in his theory for why a higher stage is better" (p.17).

Mature moral judgment is not, however, a guarantee of morally responsible conduct. In fact, a critical link between moral understanding and moral commitment is the place of moral values in people's identities. Blasi (1993) has shown that this integration of self (or ego) with moral understanding forms the basis for a unwavering commitment to the common good. Although moral behavior requires moral judgment or moral reflection, it also depends on how and to what extent the person's moral concerns are important to their sense of selves as moral persons.

Yet another reason we cannot rely exclusively on moral judgment as sufficient for moral behavior is that some moral commitments are not conscious deliberations. Instead, some moral actions are automatic or habitual. Whereas moral judgment or moral reflection is closely associated with cognitive competence, moral habits are embedded in emotional and behavioral systems that are reinforced by years of practice and/or cultural context. For example, when high schools or colleges facilitate service experiences (i.e., new role-taking opportunities) they can lead to an enduring conception of self as socially concerned and engaged (Youniss & Yates, 1997).

Can Cognitive-Development Become a Dependent Variable? With the research base outlining the advantages of moral and cognitive complexity, we have turned to the intervention question. Can educational programs be designed to foster cognitive and moral change? Within this question, we have posited three dispositions that discriminate between more and less successful adults and teaching professionals (Oja & Reiman, 1998; Sprinthall, Reiman, & Thies-Sprinthall, 1996). They include:

- The teacher as epistemologist and compassionate manager of learning and instruction for all learners;
- The teacher as committed representative of moral purpose and democratic principles, and
- The teacher as self-actualized individual.

These three dispositions have been operationalized in the following way. The first disposition, teacher as epistemologist would be assessed by measuring students ability to symbolize professional experience and to flexibly and reflectively solve problems. The second disposition, teacher as committed representative of moral purpose and democratic principles, was assessed through measurement of prospective teachers' postconventional moral judgment using the Defining Issues Test. The third disposition, teacher as self-actualized individual was assessed by measuring students' ability to interpret the views of self and others, and to be identity resolved. In this paper, we report longitudinal research on the second disposition – to demonstrate postconventional moral reasoning.

Our deliberative psychological and professional education programs (DPPEs) are based on Mead's (1934) concept of complex new social role taking, which was underscored by Kohlberg (1969) and Sprinthall, Reiman, and Thies-Sprinthall (1993) as positively affecting moral and conceptual reasoning. The importance of social role taking in promoting moral change has also been illuminated by Selman (1980) in his work with young children and adolescents. Each of these scholars --Mead, Kohlberg, Sprinthall, Reiman, and Thies-Sprinthall, and Selman, found that complex new role-taking was a bridge or necessary condition (catalyst) leading to significant moral and conceptual change. An example of role-taking is described by Reiman and Thies-Sprinthall (1998) in their exploration of mentoring programs. The mentor teacher assumes the complex new role of assisting a novice teacher. In all cases, we have found that the mentor benefits from the DPPE framework and shows significant gains in moral growth when contrasted with participants in the control groups. However, the novice teacher also gains from the experiences as well (improved teaching performance, increased learner-centered focus, decreased personal concerns, stronger sense of profession efficacy). In effect, the sustained mentoring requires active engagement in the life and work of a colleague. The sustained support of the new teacher entails moral and emotional challenges that can expand the mentor teacher's empathy and responsibility, thereby leading to a change in the way the teachers see themselves, with moral reflection and judgment becoming a more central part of their self-definitions. We have learned from these studies that cognitive-structural growth requires at least six elements of educational programming:

1. Contextual understanding and building trust. This condition requires the person in the new role to become acquainted with the helpee. Such relationship building can include discussing prior experiences, learning styles, and sharing feelings and thoughts about the new experience. What we repeatedly find is that becoming sensitive to learning contexts and building a "high trust" atmosphere is a necessary but not sufficient condition for growth.
2. Complex new social role-taking (not role playing). This involves selecting a complex helping experience in a real world context such as counseling, tutoring,

or community or school internship. The new role-taking (action = a complex new "human-helping" experience that involves intensive social interaction, ill-structured challenges, and the resulting cognitive and affective perturbations) precedes and shapes the intellectual consciousness that grows out of it.

3. Guided Inquiry. This involves shared self-assessment/analysis and reflection on the new role-taking experience. The inquiry can include sequenced readings, structured self-assessments of performance (e.g., new tutoring skills such as active listening or higher-level questioning), structured and scaffolded dialogic reflective writing about the new experience, and informal supportive discussions about the affective concerns that are arising as the person undertakes the complex new experience.
4. Balance. It is important that the action and inquiry remain in balance or as praxis. Usually, this means that the new helping role is sequenced with guided inquiry (self-assessment and reflection) each week. Too great a time lag between action and inquiry or the other way around seems to halt the growth process.
5. Continuity. There is an age-old learning truism that spaced practice is far superior to massed. We find that to achieve the complex goal of impacting cognitive structures in the moral and cognitive domains requires a continuous interplay between action and inquiry over a minimum of six months. A one- or two-week workshop followed by actual helping activity did not shift cognitive structures.
6. Support and Challenge. In the instructional phases of the role-taking programs we essentially rediscovered Vygotsky's zone of proximal development. (1978). Piaget (1964) had documented the problems of assimilation/accommodation and disequilibrium. Since we were "requiring" the participants to engage in a more complex role with greater responsibility, we often found the participants in the middle of disequilibrium. Thus, we needed to help participants by providing support as they became disequilibrated, while not eliminating the challenge of the new experience. Structural growth does not come cheaply. In fact, we have come to understand just how much "loss" can be involved as persons give up current preferred systems of meaning making for more complex modes of reasoning. This is a greatly neglected area in developmental literatures.

EFFECTS OF COLLEGE ON POSTCONVENTIONAL MORAL JUDGMENT

Moral Judgment Growth at N.C. State University

A program for new teacher education students was developed and tested that built on these six conditions just described. Given the appropriateness of moral judgment as a needed college and teacher education outcome variable, at N.C. State University we decided to institute two longitudinal studies of the moral judgment growth of our students across their four-year college experience. There were 49 students in the first cohort and 44 students in the following year's cohort. Seventy-one percent of the participants in the first cohort were female (n=35) and 26% of the participants were male (n=13). Gender was not reported by one participant. The second cohort (n=44) included 75% females (n=33) and 25% male (n=11). All entering students were from North Carolina.

N.C. State University is a Research I land-grant institution with 28, 400 students. The longitudinal research was undertaken to better understand growth in a series of developmental domains including the dimension of moral judgment. An overall purpose was to provide faculty and administrators with an understanding of whether more deliberative educational programming that including the role-taking and guided inquiry framework would be more powerfully educative on a series of developmental dimensions including the moral judgment dimension. We administered the Defining Issues Test as one of three developmental measurement systems. The test was recently reviewed by Rest, Narvaez, Bebeau, and Thoma (1999). The test emphasizes cognition and developmental schemas. They postulate three structures of ethical thinking: the personal interest schema, the maintaining norms schema, and the postconventional schema.

The teacher education students in the two samples (see figure 2) were administered a battery of assessments including the DIT during their first week at the University. At that time, students were informed about the purpose of the study, advised that participation was voluntary, and assured that all results would be confidential. Students completed a letter of informed consent to voluntarily participate. The battery of assessments took 60- to 90- minutes to complete. The DIT was the first instrument in the packet to complete. After testing was completed, participants placed all materials into their envelopes. Investigators collected all envelopes and then assigned a four digit number to each set of assessments. Only the principal investigator had access to the names and assigned numbers of the study participants. To protect participants' identities, numbers only were used in data analysis. Posttesting was completed during the month of April of the students' senior year.

DIT postconventional moral judgment reasoning increased from 34.78 to 47.32 over four years for the first cohort. The mean gain for the longitudinal cohort (n=49) was +12.54. The college experience effect was assessed by calculating the effect size (d) used by Pascarella and Terenzini (1991) in their analyses of college effects: freshman-to-senior change divided by first-year standard deviation. Bowen(1977) has proposed the following rules for interpreting effect sizes: small = 0.10-0.39, moderate = 0.450-0.69, large = 0.70-0.99, and very large=1.00 and above. The effect size (d) for moral reaasoning change in the first teacher education cohort is .57. This is a moderate effect size using the Bowen (1977) rule. Although this is a moderate effect, it is less than the effect sizes for other liberal arts colleges and universities in Figure 2. However, some of this difference is accounted for by the large standard deviation for the first sample.

DIT postconventional moral judgment reasoning gain scores for the second cohort teacher education sample (n=44, gain = +12.08) are more comparable to principled reasoning gains for the other longitudinal cohorts. The effect size (d) for this change is .68. This is a high-moderate effect size using the Bowen rule.

Consistent with other DIT research (Walker, 1991), there were no significant gender differences in postconventioanl moral judgment reasoning. However, females in the both teacher education samples grew more than the males, however these differences were not statistically significant. In a comprehensive investigation of gender differences on the DIT, Thoma (1986) conducted a meta-analysis of 56 DIT studies involving over 6,000 participants. Thoma found that gender differences accounted for .002 of the variance compared to the variable of education, which was over 250 times more

powerful. The outcome of this study contradicts claims made by Gilligan (1977, 1982) that research in this genre is biased against females.

Meta-Analysis of College Effects: Comparison of Teacher Education Cohorts with other College Samples

The average gain across the two teacher education cohorts is 12.31 with an averaged effect size of .62. The average gain score gain score of 12.31 in postconventional moral judgment is very large. Reasons for the size of the gain are discussed in the discussion and implications section of this paper. As well, the average gain score of 12.31 for the two teacher education cohorts was larger than any other higher education institution longitudinal sample that is represented in figure 2. However effect sizes for the teacher education samples are comparable to the other samples due to the large standard deviation that exists for each sample.

Place Figure 2 About Here

Six other college samples are portrayed in figure 2. Two of the four comparison samples represent larger universities (Univ. of California, Irvine and West Point) while the other four samples represent smaller liberal arts colleges (Bethel College, Alverno College, and Wheaton College). The average gain in postconventional moral judgment reasoning over four college years is 11.18. In contrast, the average gain in postconventional moral judgment reasoning over four years is 10.375 for the liberal arts colleges. When average effect sizes between universities and liberal arts colleges are compared there is a reverse trend, that is, the average effect size for change in postconventional moral judgment at liberal arts colleges is .78, while the average effect size for change in moral judgment at the universities is .71. Large standard deviations for selected samples account for this reversal. It is important to note that there are other longitudinal samples available for liberal arts colleges. However, I sought to have an equal number of universities and liberal arts colleges for ease of comparison.

It is important to note these effects are some of the largest of the many college impact variables that have been studied (Pascarella & Terenzini, 1991). The average effect of .74 exceeds many other average college effects, such as general verbal (0.56), quantitative (0.24), independence (0.36), and interpersonal relations (0.36). The average effect size in the moral judgment studies (0.74) is only exceeded by subject matter knowledge (0.84), critical thinking (1.00), and ability to deal with conceptual complexity (1.20) (McNeel, 1994).

McNeel (1992) also has analyzed college students' moral development across majors. His data shows sharper growth profiles for selected majors. High moral growth majors include psychology (1.48), nursing (1.47) and social work (1.01). McNeel argues that this growth is due to the major focus on "understanding humans in all their diversity and/or major that include a central integration of ethical considerations within the content of a professional course of study" (McNeel, 1994, p.34). In contrast, he finds that more vocationally-oriented majors such as education and business show more moderate effects

(0.58). Since educators need to understand their students in all their diversity, these data are disturbing. According to McNeel, this lower moral growth effect is due to the average education and business senior postconventional moral reasoning score (40.2) whereas the average senior score for high moral growth majors is 49.4. As noted earlier, the average moral growth effect for the two teacher education samples (0.62) is relatively comparable to other nationally normed data on moral growth of teacher education students (0.58). However, the average senior postconventional moral reasoning score for the two teacher education samples (48.67) is more comparable to the high moral growth majors (49.4). As well, the gains scores reported for the two teacher education samples are greater than all other samples included in the comparison (see figure 2). McNeel notes that freshman with higher moral judgment scores tended to show significant descreases in principled reasoning during their four years. This trend was not evident in the two teacher education samples reported here.

DISCUSSION AND IMPLICATIONS FOR TEACHER EDUCATION

Results of the present study indicate a moderate and significant change in postconventional moral judgment reasoning for the pre-service teacher education students. This finding was compared with other four-year longitudinal studies and the results are similar – that is, there were substantial positive gains in postconventional moral judgment reasoning during the four years. These gains were the largest of the selected longitudinal samples reviewed. As well, the average senior teacher education moral growth scores are comparable to other high moral growth majors such as psychology, nursing, and social work. Interpreting these higher growth profiles is difficult. Perhaps the results are due to the deliberative role-taking and guided inquiry curriculum (DPPE) that was embedded in these teachers' experience. Certainly the integration of ethical considerations, perspective taking, and sustained reflection may have contributed to the higher post-test scores as well as to the substantial gains in moral judgment growth that were seen in both teacher education samples. The higher growth trends also could be due to differences in the personal qualities of students, differences in extracurricular commitments, or many other factors.

Teaching is very important to our nation and our communities. Teachers have considerable influence on students' moral and intellectual development (Chang, 1994; Mentkowski, 2000; Yost, 1997), and educators are proposing that more attention be given to teacher dispositions in colleges of education and schools (Goodlad, 1994; Oser, Dick, & Patry, 1992, Strike, 1996). The limited studies of teachers note that moral decision making occurs daily as teachers select learning outcomes, structure classroom activities, allocate professional resources, and engage students, parents, and the community in learning and dialogue (Maslovaty, 2000; Oser & Altof, 1993). As Rest, Narvaez, Bebeau, and Thoma (1999) acknowledge, persons' ability to think abstractly and to flexibly consider moral problems from multiple perspectives is an indication of postconventional principled moral reasoning. Such an ability is one hallmark of wise professional judgment and action. The evidence of higher growth profiles in the two teacher education samples could be of great potential significance.

This research evidence may suggest that although teacher education students enter college at lower levels than college students with other majors (Rest & Narvaez, 1994), curriculum can be developed that fosters important gains in moral judgment. In this study, teacher education students participated in additional service learning (role taking) that was joined with intensive self-analysis and reflection. These students showed gains in principled judgment reasoning that were greater than their counterparts in other teacher education programs (McNeel, 1994).

The promising results of this study lead us to believe that there was a "roletaking and guided inquiry" effect. That is, the more deliberate psychological and professional development curriculum (DPPE) may account for greater gains in postconventional moral judgment reasoning. Applications of this construct and related research to teacher professional development are reviewed by Sprinthall, Reiman, and Thies-Sprinthall, 1996). As well, the "roletaking and guided inquiry" effect has been reviewed by Reiman (1999).

According to Rest, et al. (1999) "The critical characteristic of a college for promoting moral judgment seems to be a commitment to critical reflection" (p.73). Yet, many suggest that teacher education too often fails to integrate awareness of and discussion about ethical issues in teaching (Beyer, 1991; Goodlad 1990, 1994; Hostetler 1997; Oser & Altof, 199?; Sockett, 1993; Strike, 1996). Yet dialogue is not sufficient. Dialogue must be joined with action or as praxis (Friere, 1981). This study suggests that reflection may be important, and could be integrated into teacher education programs (as well as other professional preparation programs) in ways that permit future teachers to reason about and respond to the many moral and ethical issues that arise in the context of their progressively more "practice-based" experience (i.e., roletaking).

REFERENCES

Ajzen, I. (1988). Attitudes, personality, and behavior. Chicago: The Dorsey Press.

Beyer, L.E. (1991). Schooling, moral commitment, and the preparation of teachers. Journal of Teacher Education, 42, 205-215.

Blasi, A. (1980). Bridging moral cognition and moral action. Psychological Bulletin, 88, 1-45.

Blasi, A. (1993). The development of identity: Some implications for moral functioning. In G.G. Noam and T.E. Wren (Eds.), The moral self (pp. 99-122). Cambridge, MA: The MIT Press.

Bridges, C., & Priest, R. (1983). Development of value and moral judgments of West Point Cadets (Report No. USMA-OIR-83-002). West Point, NY: United States Military Academy, Office of Institutional Research.

Chang, F.Y. (1994). School teachers' moral reasoning. In J. Rest and D. Narvaez (Eds.), Moral development in the professions: Psychology and applied ethics (pp. 71-83). Hillsdale, NJ: Erlbaum.

Colby, A., & Erlich, T. (2000). Higher education and the development of civic responsibility. In T. Erlich (Ed.), Civic responsibility and higher education (pp. xxi-xliii). Phoenix, Arizona: The American Council on Education and The Oryx Press.

Davison, M.L. (1979). The internal structure and the psychometric properties of the Defining Issues Test. In J. Rest (Ed.), Development in judging moral issues (pp. 223-245). Minneapolis: University of Minnesota.

Duckett, L.J., & Ryden, M.B. (1994). Education for ethical nursing practice. In J. Rest and D. Narvaez (Eds.), Moral development in the professions: Psychology and applied ethics (pp. 51-70). Hillsdale, NJ: Lawrence Erlbaum Associates.

Friere, P. (1981). Education for critical consciousness. New York: Continuum.

Fullan, M. (1993). Change forces: Probing the depths of educational reform. London: Falmer.

Gilligan, C. (1977). In a different voice: Women's conceptions of self and morality. Harvard Educational Review, 47, 481-517.

Gilligan, C. (1982). In a different voice: Psychological theory and women's development. Cambridge, MA: Harvard University Press.

Goodlad, J.I. (1990). Places where teachers are taught. San Francisco: Jossey-Bass.

Goodlad, J.I. (1994). Educational renewal. San Francisco: Jossey-Bass.

Hostetler, K. D. (1997). Ethical judgment in teaching. Boston: Allyn and Bacon.

Katz, L., & Raths, J. (1985). Dispositions as goals for teacher education. Teaching and Teacher Education, 1, 301-307.

Lampe, J. R. (1994). Teacher education students' moral development and ethical reasoning processes. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.

Loxley, J. C., & Whiteley, J. M. (1986). Character development in college students. Volume II: The curriculum and longitudinal results. Schenectady, NY: Character Research Press.

McNeel, S.P. (1994). College teaching and student moral development. In J. Rest & D. Narvaez (Eds.), Moral development in the professions: Psychology and applied ethics (pp. 27-49). NJ: Erlbaum.

Mead, G.H. (1934). Mind, self, and society. Chicago: University of Chicago Press.

Mentkowski, M., & Straight, M. J. (1983). A longitudinal study of student change in cognitive development, learning styles, and generic abilities in an outcome-centered liberal arts curriculum. Milwaukee, WI: Alverno College, Office of Research and Evaluation. (ERIC Document Reproduction Service, No. ED 239 562)

Mentkowski, M. and Associates (2000). Learning that lasts. San Francisco: Jossey-Bass.

Maslovaty, N. (2000). Teachers' choice of teaching strategies. Journal of Moral Education, 29(4), 429-444.

Murray, F. (Ed.) (1996). The teacher educator's handbook: Building a knowledge base for the preparation of teachers. San Francisco: Jossey-Bass.

NCATE (2000, March). NCATE 2000 Unit Standards for Colleges of Education. Washington, D.C.: NCATE

O'Keefe, P., & Johnston, M. (1989). Perspective-taking and teacher effectiveness: A connecting thread through these developmental literatures. Journal of Teacher Education, 40(3), 14-20.

Oja, S.N., & Reiman, A.J. (1998). Describing and promoting supervision for teacher development. In E. Pajak and G. Firth (Eds.). Handbook of research on school supervision. New York: Macmillan.

Oser, F., Dick, A., & Patry, J.-L. (Eds.) (1992). Effective and responsible teaching: A new synthesis. San Francisco: Jossey-Bass.

Oser, F., & Altof, W. (1993). Trust in advance: On the professional morality of teachers. Journal of Moral Education, 22, 253-272.

Pascarella, E.T., & Terenzini, P. (1991). How college affects students: Findings and insights from twenty years of research. San Francisco, CA: Jossey-Bass.

Piaget, J. (1964). Judgment and reasoning in the child. Patterson, NJ: Littlefield & Adams.

Reiman, A.J., & Peace, S.D. (2002). Promoting moral and conceptual growth through peer coaching. Journal of Moral Education, 31(1).

Reiman, A.J. (1999). The evolution of the social roletaking and guided reflection framework in teacher education: Recent theory and quantitative synthesis of research. Teaching and Teacher Education, 15(6), 597-612.

Reiman, A.J., Sprinthall, N.A., & Thies-Sprinthall, L. (1999). The conceptual and ethical development of teachers. In R. Mosher, D. Youngman, and J. Day (Eds.), Human development across the life span (pp. 89-102). Westport, CT: Praeger.

Rest, J. (1979). Development in judging moral issues. Minneapolis: University of Minnesota Press.

Rest, J. (1983). Morality. In P.H. Mussen (Series Ed.) & J. Flavell & J. E. Markman (Vol. Eds.), Handbook of child psychology: Vol. 3, Cognitive Development (4th ed., pp. 556-629). New York: Wiley.

Rest, J. & Narvaez, D. (1994). Moral development in the professions: Psychology and applied ethics. Hillsdale, NJ: Lawrence Erlbaum..

Rest, J., Narvaez, D., Bebeau, M., & Thoma, S. (1999). Postconventional moral thinking: A neo-Kohlbergian approach. Mahwah, N.J.: Erlbaum.

Selman, R. (1980). The growth of interpersonal understanding. New York: Academic Press.

Shaver, D. G. (1985). A longitudinal study of moral development at a conservative religious liberal arts college. Journal of College Student Personnel, 28, 211-218.

Sikula, J. (Ed.) (1996). Second handbook of research on teacher education. New York: Macmillan.

Sockett, H. (1993). The moral base for teacher professionalism. New York: Teachers College Press.

Sprinthall, N.A., & Thies-Sprinthall, L. (1983). The teacher as an adult learner: A cognitive-developmental view. In Gary Griffin (Ed.), Staff development: Eighty-

second yearbook of the National Society for the Study of Education (pp. 24-31). Chicago: University of Chicago Press.

Sprinthall, N.A., Reiman, A.J., & Thies-Sprinthall, L. (1996). Teacher professional development. In J. Sikula (Ed.), Second handbook of research on teacher education. New York: Macmillan.

Strike, K. (1996). The moral responsibilities of educators. In J. Sikula (Ed.), Second Handbook of Research on Teacher Education (pp. 869-892). New York: Macmillan.

Thoma, S. (1986). Estimating gender differences in the comprehension and preference of moral issues. Developmental Review, 6, 165-180.

Thoma, S., Rest, J., & Barnett, R. (1986). Moral judgment, behavior, decision making, and attitudes. In J. Rest (Ed.), Moral development: Advances in research and theory (pp. 133-175). New York: Praeger.

Thoma, S. (1994). Moral judgments and moral action. In Jim Rest and Darcia Narvaez (1994). Moral development in the professions: Psychology and applied ethics. Hillsdale, NJ: Lawrence Erlbaum..

Vygotsky, L. (1978). Mind in society. Cambridge, MA: Harvard University Press.

Walker, L. (1991). Sex differences in moral reasoning. In W. Kurtines & J. Gewirtz (Eds.), Handbook of moral behavior and development (pp. 333-364). Hillsdale, NJ: Lawrence Erlbaum Associates.

Wise, A.E., & Lieibbrand, J.A. (2001). Standards in the new millennium: Where we are, where we're headed. Journal of Teacher Education, 52, 244-254.

Wittrock, M. (1986). Handbook of research on teaching (3rd ed.). New York: Macmillan.

Yost, D.S. (1997). The moral dimensions of teaching and preservice teachers: Can moral dispositions be influenced? Journal of Teacher Education, 48, 281-292.

Youniss, J., & Yates, M. (1997). Community service and social responsibility in youth. Chicago: University of Chicago Press.

Figure 1: Rest's Four Psychological Components Determining Moral Behavior*

Component 1:	Moral sensitivity (Interpreting the situation)
Component 2:	Moral judgment (Judging which action is morally right/wrong)
Component 3:	Moral motivation (Prioritizing moral values relative to other values)
Component 4:	Moral character (Having courage, persisting, overcoming distractions, implementing skills)

* Adapted from Rest, J. (1994). Background theory and research. In J. Rest and D. Narvaez (Eds.), Moral development in the professions (p. 5). Hillsdale, New Jersey: Lawrence Erlbaum Associates.

Figure 2

Longitudinal Studies of Percent of Principled Reasoning for 4-Year First-Year-Senior Comparisons With Effect Size (d)*

		Longitudinal Results**				
College/University	First Year	Sr	N	SD	Change	d
Universities:						
N.C. State (A)	34.78	47.32	49	21.82	12.54	.57
N.C. State (B)	37.95	50.03	44	17.73	12.08	.68
U Calif., Irvine(C)	36.90	48.10	95	13.26	11.20	.84
West Point (D)	34.40	43.30	104	11.83	8.90	.76
Liberal Arts Colleges:						
Bethel College (E)	35.70	46.40	216	11.62	10.70	.92
Alverno College (F)	35.60	47.40	70	11.53	11.80	1.02
Alverno College (G)	42.80	50.90	70	14.53	8.1	.56
Wheaton College (H)	41.50	52.40	44	17.22	10.90	.63

* In each case, following Pascarella and Terenzini (1991, p.15), effect size is the senior minus first-year difference divided by the first-year standard deviation.

** Longitudinal data extensively draws from research by McNeel (1994, p. 32).

A Reiman (2001, p. 23).

B Reiman (2002, p. 20).

C Loxley and Whiteley (1986, pp. 280, 275).

D Bridges and Priest (1983, p. 29).

E McNeel (1994, p.32).

F Mentkowski and Straight (1983, p.178)

G Mentkowski and Straight (1983, p. 178). This sample represents older students.

H Shaver (1987, pp. 214-215).

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

ERIC®

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: A Comparison of Four-Year Longitudinal Studies of Postconventional Moral Judgment Reexamined — in Teacher Education and Other Selected Undergraduate Samples

Author(s): Alan J. Reiman

Corporate Source: North Carolina State University

Publication Date: (AERA) April, 2002

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents	The sample sticker shown below will be affixed to all Level 2A documents	The sample sticker shown below will be affixed to all Level 2B documents
PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 1	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 2A	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) 2B
Level 1 ☐	Level 2A ☒	Level 2B ☐
Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) and paper copy.	Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only	Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, → please

Signature:	Printed Name/Position/Title: Alan Reiman, Associate Professor
Organization/Address: North Carolina State University, Raleigh, North Carolina	Telephone: (919) 515-1785 FAX:
	E-Mail Address: Alan_reiman@ncsu.edu Date: 4/5/2002

(over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant this reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

ERIC CLEARINGHOUSE ON ASSESSMENT AND EVALUATION
UNIVERSITY OF MARYLAND
1129 SHRIVER LAB
COLLEGE PARK, MD 20742-5701
ATTN: ACQUISITIONS

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
4483-A Forbes Boulevard
Lanham, Maryland 20706

Telephone: 301-552-4200
Toll Free: 800-799-3742
FAX: 301-552-4700
e-mail: info@ericfac.piccard.csc.com
WWW: http://ericfacility.org

EFF-088 (Rev. 2/2000)